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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,757	09/06/2003	To-Nien Lin	67,200-1009	9072

7590 02/18/2005

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EXAMINER

RAO, SHEELA S

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/656,757	LIN ET AL.	
	Examiner	Art Unit	
	Sheela Rao	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09062003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-28 are pending and presented for examination.
2. Applicant's submission of references on form PTO-1449 has been considered. A signed copy of the form is attached.

Specification

3. The disclosure is objected to because of the following informalities:

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. The Examiner came across many grammatical and spelling errors during review of the disclosure. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Appropriate correction is required.

Claim Objections

4. Claims 1-7, 12-14, and 18-24 are objected to because of the following informalities:

Claims 1-7, 12-14, and 18-24 all refer to a "pilot lot". The use of a pilot lot as defined by the Applicant is not clearly understood. An explanation of the pilot lot is given on page 5 of the instant disclosure; however, a definition as it pertains to the instant invention has not been cited. For purposes of examination, Examiner interprets a pilot lot to be a test group in the fabrication and overly offset process of the instant invention. Appropriate correction is required.

Claims 18 and 19 claim a "lithography process". The intent of the instant invention is directed toward the photolithographic process; yet, instant claims 18 and 19 claims the control of a lithographic process. Examiner understands that the difference between the two processes is the manner in which the pattern is transferred. There is no support in the instant disclosure for the use of the lithographic process. This Examiner objects to the use of a lithographic process as claimed in instant claims 18 and

19 under the assumption of typographical errors, and interprets the process as being a photolithographic process for examination purposes.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bode et al. in US Patent No. 6,737,208 B1 in view of Shimizu in US Patent No. 6,788,996.

Bode et al. disclose a method and apparatus for controlling photolithography overlay registration. In the disclosure the use of a processing cell which includes a photolithography stepper, overlay metrology tool, and a controller is taught. As can be seen in column 4 beginning at line 7 in reference to Figure 1, Bode explains the details of the patented invention which is similar to that of instant claims 1, 5, 12, 18, and 22.

With regard to instant claims 9, 25, and 26 wherein the use of semiconductor or ceramic substrate products are selected from the group of microelectronic products, Bode teaches the use of semiconductor devices as overlay control is an important aspect of semiconductor manufacturing.

The use of a stepper or scanner as per claims 10, 16, 27 and 11, 17, 28, respectively, is shown in Figure 1 of the patented disclosure.

As per the fabrication processing using lots to carry out the production process, Bode fails to teach or fairly suggest the process of dividing the products into lots. For this reason, the prior art of reference to Shimizu is relied upon. Shimizu teaches the production of semiconductor in a controlled environment. At column 1, beginning at line 14, Shimizu states the semiconductor production is generally controlled on the basis of individual lots. The explanation continues by teaching the division of the production set to be divided into smaller clusters or lots for processing. Carriers are used to carry the lots to their respective production sites. In the use of lots, it is clearly evident that plural lots are arranged for

production. Furthermore, a lot can be labeled and selected for use as a test lot for testing the control and processing of the fabrication machinery and units. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the "lot production" method of Shimizu with the overlay registration controlling method and system of Bode to achieve a more efficient and expedite the fabrication and registration process.

For the reasons stated above, the limitations of the claimed invention is taught by the prior arts of record; thereby, rendering the instant claims unpatentable.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela Rao whose telephone number is (571) 272-3751. The examiner can normally be reached Monday - Friday from 9:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on (571) 272-3749.

Any response to this action should be mailed to:

**Commissioner of Patents and Trademarks
Washington, D.C. 20231**

or faxed to:

(703) 305-3718 for Official Communications

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.



Sheela S. Rao
February 15, 2005



**LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**